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THE HOME AND SANITARIUM TREATMENT OF TUBERCULOSIS.*

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Last year when the symposium on tuberculosis was held before the St. Louis Medical Society the same subject was given me. If in attempting to present it before this association with all the strength of honest conviction, I reproduce some of the arguments there used, I ask that I be spared the charge of "vain repetition." We are now in the midst of a quiet but most effective revolution in our methods of care and treatment of this disease, and it is only by repeated demonstrations of the facts and deductions most potent in bringing about this revolution that the truth can be finally and firmly fixed in the minds of the profession and of the laity.

The last decade has placed two truths clearly before us:

First.—Tuberculosis is a preventable and curable disease.

Second.—The home and the sanitarium have been the most effective factors in demonstrating this truth.

* Read at the Symposium on Tuberculosis before the Missouri State Medical Association, May 17, 1904.

The statements of the curability, and even the self limitation of tuberculosis have been on record from before the time of the Rokitanskys, but until recent years they have been received as a pathologic hypothesis rather than a practical verity. Twenty-five hundred years ago Hyppocrates said that all consumptives will die, and this dictum has had a place in the minds of the profession no less abiding than the Hippocratic oath.

A few years ago the physician aimed at little more than some general and time-honored prescription and a parting benediction to a climatic Eldorado, with little thought or knowledge of special fitness for the individual case. The desire on the part of the patient "to do some great thing" was gratified, and the physician relieved of at least one of his many responsibilities. Nor has the idea of climatic cure been a definite one. Flint used to send his patients to the plains of Illinois and reported cures. Then Colorado became the Mecca, the California coast was tried

and the foot-hills of the Sierras were populated with the unfortunates who needed more than they found in their exile. Backward the tide rolled through Arizona and New Mexico. Texas became the land of promise. The claims of Florida were lost in the multitudinous reports that hailed from the mountains of the Carolinas, and to-day we have the best work done in such places as the Saranac Sanatoria, the Phipps Institute, the Loomis Sanatoria and others in the climate from which ten years ago the tubercular fled to Eldorados never reached. How many of you can recall cases which, having true tuberculosis, went to some distant resort and came back well? The comforts of home and the association of friends more than balance the therapeutic value of climatic change, especially when handicapped by nostalgia, indifferent food, the danger of renewed infection in association with other tubercular cases ignorant of the laws which govern the propagation of the disease.

This is the prelude to the proposition that in the home and in the sanitarium you can have all that is necessary in the so-called "climate cure" and the other necessities no less important. Just here a word as to our own climate. In our own state, much as we disloyally decry its climate, the annual death roll per 1,000 of population is only 1.32, while the average for all the states and territories is 1.44. It seems to me that these figures alone, which are deducted as carefully as possible from official reports of the Health Boards, should cause us to hesitate to apply the time-worn, heart-breaking, ineffectual formula, "change climate" to any but the most exceptional cases.

What have we in place of this? The best, the very best. Four things are demanded in every case. Without desiring to trespass on the province of the paper that is to follow, I will say without fear of contradiction that these are: Fresh air, proper and abundant nourishment, rest and freedom from worry and introspection. All of these can be had in a larger and better way at home, or in a home-like sanitarium, than the average health resort or place of exile.

Dr. Flick, whose practical teaching has done much to give us a rational treatment in tuberculosis, says: "Climate itself is of little value in the treatment of consumption. It is the outside air which counts, and it makes very little difference where this outside air is gotten from, so it is gotten every day and all the day and night." The very best results in this country are being obtained in sanatoria in New York and Massachusetts, while the worst are, I truly believe, in Arizona and New Mexico.

Not that there is anything inimical in climatic conditions there, but that there is no adequate compensation for the privations, nostalgia and non-systematic living, nor sufficient guard against new infection from the crowding together of careless and ignorant sufferers. Those cases that do well by changing climate should do equally well in a well conducted sanitarium, or, as I firmly believe, in the home, after intelligent instruction in personal care. I know that this statement will not be universally accepted, but the sentiment is growing none the less.

One of our highest authorities

(Knopf) says: "If I had to choose between sending a patient to what is usually considered an ideal specific climate, but where he would live as in an ordinary health resort, or keeping the patient at home in a fairly pure atmosphere and applying the hygienic and dietetic treatment under constant medical supervision, I should choose the latter and think the patient had a far better chance of recovery."

In a very elaborate work, Blumfield has given the results of his daily observations throughout the year of the influence of the various meteorologic changes exerted on a large number of phthisical patients. His conclusions prove what Detweiler has been preaching for twenty years, "that temperature, atmospheric pressure and humidity scarcely influence the condition of the consumptive." Weber, Dujardin, Beaumetz and Von Leyden have voiced the opinion that the successful treatment of consumption is possible where there is pure air, good food, proper hygienic conditions and carefully regulated exercise.

In the last decade the careful student has compiled certain facts regarding tuberculosis. He finds that it is a communicable disease, that it is limited, that the specific germ is not a virulent one as in diphtheria, or so readily transmissible as in yellow fever or smallpox. He has gained certain knowledge regarding its communicability and has formulated methods to limit it in the home, workshop and in the school. In the individual he has seen that the invasion and multiplication of the specific germ depends largely on lessened local resistance and perverted function, and that the process of advance is slow. As a fitting practice deduction, he has found that tuberculosis is curable under the same conditions in which most other diseases are curable.

With the facts before him, the physician has begun to formulate new methods in general and to make more careful study of the individual. The result of his experience has been the coming into favor of the home and sanitarium treatment of tuberculosis, and a marked diminution of the death rate from this cause in countries where such treatment has obtained most favor. If we would limit tuberculosis there must be a system of education for the public and special care for the individual. In our anxiety for the one infected, we too often forget our responsibility for the many as yet unaffected. The latter is the greater need and in working out the problem of protection the sanitarium should be as potent as in caring for the sick. It is these considerations that have made the home and sanitarium treatment of tuberculosis the largest field of therapeutic work to-day. Practically the subject is one, for the sanitarium should be a home and the home a sanitarium.

The care of each case must include the thought of protection to others. If it be true that an advanced case of tuberculosis may expectorate many millions of bacilli daily, if these bacilli are viable for days under proper conditions of heat and humidity, certainly each case taken from the home or the public thoroughfare is one less source of danger. Not only that, but the sanitarium methods for the care of the sputum can be taught in the home. May I again urge this upon

my fellow-workers in this department.

I believe there are two principal ways for the transmission of the bacilli from the sputum: First, by drying of the particles and their inhalation, and, secondly, by unclean utensils and flies. I have more than once caught flies crawling over a cuspidor in which there was tuberculous sputum, and found bacilli in the fluid in which the flies had been drowned.

In the home and sanitarium the sputum can be easily cared for. My favorite germicide is the ordinary concentrated lye of the shops. It saponifies every particle of the sputum, thoroughly destroys the bacilli, is non-odorous and cheap. The best sputum cup I have ever found is the ordinary tin cup with hinged lid—painted or enameled on the outside. It can be partly filled with saw dust on which is sprinkled some of the caustic lye. When emptied it should be washed in a solution of lye and then rinsed in pure water. Expectoration in anything but the proper receptacles should not be permitted. The same method can be taken with the floor cuspidors which should always be covered. At Mt. St. Rose the individual sputum cups are emptied into cuspidors, which are of iron, having self-closing lids. These are taken to the furnace, the lid removed and the iron receptacle placed in the fire for five minutes.

It is not a burdensome matter but a most important one that all eating and drinking utensils used by a tubercular patient should immediately after service be put into boiling water, which is a never-failing destroyer of bacilli, while clothing that cannot be easily washed should be fumigated in a closed press. This may not be so important in itself, yet it is in line with the care that should be taken whenever practicable and always at institutions.

In every home and at every institution there should be the most perfect ventilation. The demand is not for air at a certain temperature or humidity, or a fixed degree of rarefaction, but pure unused air that has not been devitalized, containing its full equivalent of oxygen and free from toxic and irritating admixtures. Such air is not hard to find but it is another matter to make the best use of it.

In our work at Mt. St. Rose (and I beg that I may be pardoned if I refer frequently to it in illustrating this part of my subject) we had at first the greatest difficulty in preventing the patients from closing the windows and doors at night. The question of day ventilation is not difficult with large halls and verandas, but to supply fresh air to the room or ward without the ever objectionable draught was another matter. The method now in use is satisfactory and is readily adapted to any home. A twelve-inch board, resting on edge on the window sill and extending to the side of the frame, is held by hooks two inches from the sash. The raising of the sash to less than the top of the board permits free ingress of air without any direct draught. There is also a guarded opening where the sashes meet. With this simple addition, windows screened, transoms open into the halls and windows open at each end of every hall, our patients practically sleep in the open air, while in day time they live in it.

During the summer many of our patients sleep out of doors, and were you to visit the sanitarium tonight you would find rows of cots on the open verandas where our selected cases aver that they sleep better and longer than in their rooms.

Rest and exercise are potent factors in the cure of tuberculosis, but they cannot be applied by any general rule. In most cases the patient is restricted in his exercise for the first few days after admission, and if his temperature be above 100° he is confined to his bed. The most of our patients take long rests in chairs on verandas after meals, followed by gentle exercise gradually increased. Chest exercise for lung development is required of all who are able at regular intervals, and walking parties for definite distances are sent out daily when the weather permits. One of the party carries a pedometer and on no account is a prescribed distance to be exceeded.

Hydrotherapy is being gradually introduced. So far only the spinal douche has been prescribed for daily use. I believe this is as effective as more complicated procedures, and care must be taken not to tire or annoy the patient. The free use of water internally is encouraged, and a number take a teaspoonful of table salt in a glass of water night and morning. Its laxative and alterative effect is often grateful. Pure water should be the companion of pure air in the care of tuberculosis.

The proper clothing of the tubercular is important. Generally the patient's chest is overclothed. The average case as soon as admitted is relieved of the numerous layers of flannel and chamois, a tepid friction bath is given, light flannels ordered, and he is put to rest. When he is permitted to leave his room very little, if any, added protection is used around the chest, but care is taken to have the feet and limbs well clothed, but never sufficiently to produce perspiration. No tight-fitting corsets or waist bands are permitted.

The dietetic treatment of tuberculosis calls for much care and patience. Not only should the food be varied, but it must be changed at times in each case. To feed a patient to the limit of assimilation without overfeeding him, is a problem. In our institution a mixed diet is used with eggs and milk as freely as possible. The early morning meal is generally light, followed by egg and milk; an early dinner, a mid-afternoon lunch, and five o'clock tea. Most of the patients have egg and milk again at bed-time. The diet list is somewhat in accord with that advised by Knopf in his work on "Pulmonary Tuberculosis."

The subject of medication is foreign to this paper, but there are two indications of which I would speak. One is the weak heart, and the other incomplete emptying of the lower bowel. The former must be estimated in ordering rest and as a demand for strychnia and, possibly, digitalis in small doses—the latter must be considered as a possible cause of afternoon pyrexia from auto-infection. My constant practice, where the ascending colon is loaded, is to give a laxative high enema daily till the bowel is emptied, and a normal salt enema each day thereafter. It is most interesting to note the effect of this treatment upon the temperature.

What are the results of home and sanatorium treatment? It is difficult to make an accurate statement of the results of home treatment in private practice, but I am convinced, in my experience at least, better results are obtained than in the days when I shifted the responsibility to the haphazard uncertainties and cruelties of the "get-away" clan. I have not sent a tubercular patient away in years unless the conditions of home life awaited him at the journey's end.

Statistics from institutions are more valuable. At the great Falkenstein Sanatorium, Detweiler reports 14 per cent. cured, 14 per cent. relative cures and 45 per cent. improved. At Goebersdorf the percentage is even better. At the Loomis Sanatorium the cures are over 25 per cent. of all cases, and 50 per cent. improved. From the Adirondack and the Winyah Sanatoria come the same encouraging reports.

I wish we were far enough along in our Mt. St. Rose work to make a report more valuable. Our institution has been opened but eighteen months, and while the time is too short to speak confidently of many cures, there is much to encourage. We admitted during the first fourteen months till January 1, 1904, 248 cases. Of 14 in the first stage, 7 recovered and 6 improved; 52 in the second stage gave 4 recoveries, 39 improved; of 128 in the third stage, but 2 recovered, 33 improved. In explanation of the small percentage of cures, I may add that most of our cases are of the far-advanced stage, such as are not admitted to many institutions; and, further, that among those classed as "improved" are a number that may soon, I hope, be set down as cured. Clinically, we divide the cases into three classes, but use a different division for the microscopic evidence. A patient may be in the first stage clinically, but show a large number of bacilli (say an average of ten to a field), which would place him in the fifth class in the microscopic record; and we have many of these.

From a number the bacilli have disappeared, and, as far as we can keep track of them at their homes, they are doing well. One girl has gained thirty pounds during the winter; several men have gained twenty-five pounds. The greatest gain in weight has been eight pounds in three weeks. There has been a marked increase in the average strength and courage of patients in the first and second stages, and none of the depression so often found from the association of invalids. Some of the reasons for this are that the patients are not permitted to talk over their condition with each other, and that they are kept constantly employed (when not resting) with games, books, cards, needlework and with the care of flowers.

Already a general advance is being made on the "great white plague." In Germany, the home of sixty-four private and public sanatoria, there has been a wonderful decrease in the number of deaths from tuberculosis. In London there is a decrease, and in New York the rate has fallen from 4.42 per 1,000 in 1886 to 2.89 in 1901, and 10 per cent. less than last year.

In St. Louis a strong society for the limitation of tuberculosis has been formed, and if it can equal the

record of the New York and Philadelphia societies it will mean the saving of forty thousand lives in our city alone in one generation. Let me beg of you to aid in all that makes for the cure and prevention of tuberculosis as we would try to cure and prevent any other infectious disease.

Flick says: "Tuberculosis is one of the most curable of all diseases"—*not* consumption, when all resistance and function is impaired, but in the early stages of which our class of fourteen last year is an instance. It is your duty, by early diagnosis and constant practical direction, to see that patients of the first class do not join the large number already in the third class.

Pasteur said: "It is in the power of man to cause all parasitic diseases to disappear from the earth." How much of that power have we exercised?

THERAPEUTICS OF TUBERCULOSIS.

By N. P. Wood, M. D., Independence, Mo.

In the brief time allotted this paper it will not be possible to review all of the therapeutic agents that have been used in the treatment of this disease. Neither will climatic or sanitarium treatment be included, but will be confined to the home treatment of the unfortunate condition, known as general tuberculosis; naming only such agents and methods that have served the best purpose in this connection. When we remember the fact that tuberculosis has claimed its numberless victims from all classes, in all ages and from all nations, together with the fact that great and persistent effort has been made to obtain some agent or measure to control or cure this, the greatest enemy of the human race, we are driven to the regretful admission that therapeutics has no specific in the treatment of tuberculosis. Then in the management of general tuberculosis, as we now understand it, there can be but two objects in view.

First, improved nutrition, and second, mitigation of unkind symptoms. Improved nutrition implies good hygienic surroundings, exercise in open air, including lung gymnastics, good food, tonics and a cheerful spirit. In the attainment of the first of these objects we strive to improve the appetite and the digestion, stimulate secretions, control cough, fever, sweats, diarrhea and hemorrhage.

Patient should be kept in open air as much as possible. When fever is high he should be kept in bed, but bed put in the most airy place the surrondings will permit.

If able, allow patient to exercise moderately, stopping short of fatigue. This will improve appetite and digestion and increase resistive force. Woolen or silk suits should be worn the entire year.

Proper feeding is one of the most important factors in the management of tuberculous people. Food should be carefully selected, deliciously prepared and judiciously administered; selecting those articles containing the most nutrition to given quantity. Animal diet will usually meet these

requirements best, such as milk, eggs, beef, mutton, chicken, fish, &c., and as much as can be digested—no more.

If digestion is bad, small amounts frequently given will be better borne. Acid hydrochloric dilute or some form of pepsin, or both, or creasote, will aid a delinquent stomach. The administration with food of artificially obtained gastric juice, as suggested by Hepp, will aid digestion.

Before eating or drinking patient should wash out mouth with some good antiseptic solution. This is especially important in laryngeal or pulmonary tuberculosis. In thus doing we may remove one of the most fruitful causes of secondary gastro-enteritis, so common in this disease. The fact that gout and tuberculosis are seldom found in the same individual, has suggested the idea of producing a gouty diathesis.

This was undertaken by the administration of urea by Harper and others and a strictly meat diet, with some apparent results in joint tuberculosis, but none in pulmonary.

The therapeutic agents entitled to a place in the treatment of general tuberculosis are really few in number.

Cod-liver oil, iron, arsenic, strychnia and creasote. While many other agents have been used and extolled, none have specific action. And the above-named ones are entitled to the highest esteem in the treatment of this desperate condition.

Cod-liver oil is an old and has long been a popular remedy. It is indicated whenever nutrition fails. Children usually take it better than adults. And it is especially adapted to joint, bone and glandular tuberculosis. The pure oil is preferable, given in drachm to half-ounce doses.

Small doses are many times well borne when larger ones are not well received by the stomach. If it or any other agent, interferes with digestion, they must be discontinued promptly and permanently.

Any agent that retards digestion or disturbs nutrition is contraindicated. Iron, arsenic and strychnia are good tonics.

Iron is indicated in anæmia as a blood tonic and arsenic as a general tonic, and strychnine is especially serviceable when heart is weak and irregular. A dose of gr. 1-40 in early morning will often enable patient to take morning bath and alcohol rub.

These three combined in the form of ferri carbonate grs. iii to v, arsenious acid gr. 1-30, strychnia sulphate gr. 1-40, made in pill, is a good tonic and is usually as satisfactory as any tonic we may suggest.

Creasote is perhaps one of the most useful agents in the whole catalogue of remedies.

The strange bit of its history is, that after having fallen out of use for more than half a century, it has been revived and to-day holds the highest place in the therapeutics of this unfortunate malady.

By its judicial use it appears to improve the appetite and digestion, by discouraging fermentation and thus aid materially in attaining the chief object in the treatment, *i. e.*, improving nutrition.

Is also useful in intestinal tuberculosis. For intestinal disturbances it may be given in a keratin capsule, as

suggested by W. H. Flint, which capsule is not supposed to dissolve until it reaches the alkaline secretions of the intestine.

Is best tolerated in small doses. At first m. i to ii, which amount may be increased gradually until m. x or xv be given.

The very large doses some clinicians have reported given are objectionable on the grounds they are apt to irritate the stomach and urinary aparatus.

Creasote inhalations are useful when the larynx is involved.

Guaiacol is preferred by some physicians and patients. But when both are rejected by patient their salts may be used.

Cinnamic acid has claimed attention recently, but results thus far do not warrant a very high commendation.

Ichthyol has claims of positive virtue in tuberculosis—especially when the bones, glands or larynx are involved, and in tuberculous ulcers.

After ulcer is curetted it is applied to exposed surface.

It may serve well in intestinal tuberculosis combined with iodoform. Iodoform in joint tubercolosis is a familiar treatment to every physician and needs no comment.

The comfort and welfare of the patient demand attention to some of special symptoms by way of mitigation. Such as fever, cough, dairrhea and hemorrhage.

There is perhaps no fever so sure in its appearance and so persistent in its stay as this hectic fever. The fact that it is consuming the strength of the patient and at the same time associated with a disease so ravenous in its assault on the vital forces, sometimes puts a doctor wondering what he shall do with it.

Because of these facts the coal tar preparations are contraindicated, theoretically, but practically are admissible in some cases.

If combined with a heart stimulant they are less dangerous in small doses than the consuming process of a high temperature.

Three or four three-grain doses of phenacetine with strychnia, quinine or whisky an hour before fever period will control the fever measurably and add much to patient's comfort.

But the fever may be cooled by baths and sponging. While fever runs high patients should be kept in bed.

Sweating can usually be controlled ac. sul. arom., atropia, agaricin and the salt shirt.

A woolen shirt wrung out of a strong salt solution, dried and worn during the sweating period lends good service.

Cough is another very troublesome symptom. If loose give whisky or brandy; but if a dry cough, whether light or a hard cough, some sedative is desirable, as heroin, codeine, morphia. If given in small doses and often repeated they control it very much more satisfactorily than the cough syrups, composed of amm. salt, ipecac, squills, &c. These mixtures are generally nauseating.

In all cases of persistent cough the posterior nares, pharynx and larynx should be examined. It will occasionally be found that a fissure or an ulcer is responsible for the cough. In such conditions more relief from the cough will come from local application of some good antiseptic, and the inhalation of creasote, benzoin, &c.

Diarrhea is frequently present as a secondary and occasionally as a primary condition in tuberculosis. In the early stage, when not severe, the regulation of diet, care not to swallow sputum, and bismuth and pepsin, will in most cases give relief. Later in attack, when the diarrhea is more severe, opii, lead, acid tannic, &c., may be required.

If tuberculosis of the intestine is found it is very proper to resort to morphine, rather than temporize.

Hemorrhage is sometimes troublesome and dangerous.

If profuse, put patient at rest in bed and narcotize gently; suprarenal capsule may be given. But most of the homostatics, as ergot, tannic acid, &c., are useless, if not harmful.

Strapping may be resorted to with some benefit. Pads applied to axilla and over femoral vein sufficiently tight to arrest in a measure the return current, but not tight enough to interfere with the arterial current; strap two limbs at a time, and after twenty or thirty minutes gradually loosen straps and apply to the other two limbs. Thus the patient is "bled into his own limbs," which reduces the blood pressure in the lungs. The hypodermic injection of gelatine has been used for hemorrhage, but it has so often failed and has been so frequently followed by tetanus that it has not yet taken a credible place among the hemostatics.

Intra-tracheal and intra-pulmonary injections have been found both dangerous and productive of little good.

The serum treatment has been used in recent years and has had some very enthusiastic supporters. While in some cases it has appeared to arrest the progress of the disease, as shown by checking the fever and sweats and the fattening of the patient for a time, the results have not been convincing as a curative agent. However, the serum treatment is at present stimulating the highest hope of a panacea for tuberculosis.

The day may come in the progress of medical science when some agent or method may be discovered for the cure of tuberculosis. But the day *will* come, when through prophylactic medicine, tuberculosis will be almost entirely eliminated from the nomenclature of medicine.

RESPIRATORY INFECTIONS IN CHILDREN DURING THE PAST WINTER.

By John Zahorsky, M. D., St. Louis.

It was a happy advance when the more severe diseases of the alimentary canal were grouped under the general term—gastro-enteric infection, since it expressed the origin of the disease in a single name. Similarly, as I have been teaching for several years, the acute diseases of the respiratory tract should be designated by the general term—respiratory infections, reserving the term inhalation infections for local and general diseases, the pathogenic germs of which gain entrance to the system by means of the inspired air.

In the first place, we must rid our-

selves of the old concept "colds." "Colds" are not due to cold at all, but to pathogenic micro-organisms. In children, especially in infants, the etiologic significance of dampness and exposure is very slight, since "colds" are contracted without these influences in the majority of cases, and even when these factors have been present through neglect, they act only as predisposing causes. "Colds" are contagious, are due to bacteria and their active work in winter depends chiefly on the congregation of people indoors, while in summer, as we live practically in the open air, the conveyance of these germs through the air from one to another is more difficult. The cold air acts as a predisposing but not essential cause, as most respiratory diseases are caught without exposure to cold. "Colds" are caught one from the other, just as measles is carried from one patient to the other, and susceptable individuals will get a cold when in proximity to some one sneezing or coughing, whether he has been exposed or not.

We see a gradual change in the attitude of the profession toward these diseases, and in a few years it is probable that this concept will be generally used.

We should remember that cases of rhinitis, bronchitis and pharyngitis are not, as a rule, simple, but other portions of the respiratory tract than named by the term are involved. In fact, the inflammation usually begins at one point and spreads up and down the respiratory tube, so that successively, or often simultaneously, a rhinitis, pharyngitis or bronchitis, or even pneumonia, are present. The infection is overcome by the usual healing processes of the body, that is, the formation of specific antibodies. The development of these to a different degree or rapidity makes the so-called "cold" a simple or serious affection in different persons, or in the same person, at different times. It is still doubtful whether any internal or local medication, outside of relieving the symptoms, can aid in throwing off the germs of cold.

But what are the germs of "colds" or what are the usual causes of respiratory infections?

The profession generally has accepted the germ theory of influenza, and tacitly have assented to call even other respiratory diseases as infectious, since so many acute respiratory diseases are called grip. But is grip as common as it is diagnosticated? Is influenza the cause of most severe inflammations of the air passages? What other infections are mistaken for that of influenza?

With these and similar questions I have struggled for several winters, and I concluded that it was difficult to distinguish isolated cases of influenza from other respiratory infections, that we had no pathognomonic signs of either. Yet these signs are fairly definite, viz., influenza is characterized, first, by the short incubation stage, abrupt fever curve, rather little local disturbance, but much pain and general depression. While this combination of symptoms, when repeated in several individuals, is pathognomonic, it may be simulated in every conceivable way by other infections.

During the past winter I have tried to control my clinical diagnosis by a microscopical study of the secretions of the throat, nose and bronchi; in many

cases cultures were also made, but as the following out of all varities of bacteria was too laborious and really proved nothing more than could be told by microscopical examination, this latter method was mostly employed. The smear preparations carefully obtained were stained by diluted carbol—fuchsin or Loeffler's methylene blue. Occasionally Gram's method would be used.

The results of these examinations and the clinical studies showed that we had little true influenza during the last winter. Several such cases were seen during the month of February. The vast majority of infections were caused by the pneumococcus. The coryza, pharyngitis, otitis media, laryngitis, bronchitis and bronchopneumonia were caused by the same organism that causes croupous pneumonia. Beginning last September, the family epidemics extended throughout the winter. In several families a true croupous pneumonia was preceded, associated or followed in others by severe "colds" and coughs. Hence I must hold that the cases of croupous pneumonia were but incidents in a wide-spread pneumococcus epidemic.

In another series of cases only the streptococcus could be found. In a third series of cases the influenza bacillus was observed. Another interesting series of cases occurred among children and was characterized by an irregular fever and marked swelling of the cervical glands, and must fall under the general heading, glandular fever. No characteristic micro-organism was demonstrated in the pharyngeal secretion of these cases.

All of this shows that we must be very slow to diagnosticate influenza.

The differential diagnosis of these varied infections is by no means easy without bacteriologic examination. Clinical features in connection with other facts bearing on the source and prevalence of the disease need to be studied much more carefully in connection with bacteriologic examination before definite tables of differential diagnosis can be formulated.

Briefly, the signs of the diseases as known may be stated as follows:

The influenzal infection is characterized by a very short incubation period, two to three days, hence there is a very rapid dissemination of the poison; the attack is very sudden, the fever of short duration, and in infants and children not more than two or three successive elevations in temperature occur; the local inflammation is slight and out of proportion to the general symptoms; muscular pains and great prostration is more likely to be present than in other infections.

Some special signs have been given at various times which are said to be characteristic of the disease. The one which has been observed by several clinicians is the horseshoe-shaped inflammatory area of the fauces. In this the posterior margin of the soft palate and the anterior pillars of the fauces show a brick-red inflammatory discoloration.

On the other hand, the pneumococcic infection begins as a common "cold." The infection is at first at one point and the inflammation spreads up and down the respiratory tract. Fever is present usually in children and in general is proportionate to the area inflamed. Hence the eleva-

tion in temperature arises after one or two days of coryza or sore throat. One differential sign of special value is that the incubation in pneumococcic infection is much longer—five to ten days. After the persistence of the local symptoms for one or two days, the fever rises suddenly and lasting for a variable interval (one to three days) disappears by crisis. Recrudescencies and recurrences are common. Especially frequent is the occurrence of laryngitis and bronchitis. During the past winter most cases of bronchitis were caused by the pneumococcus (diplococcus lanceolatus). These cases of pneumococcic bronchitis serve as the principal disseminators of the germ and lead to the occurrence of pneumonia and broncho pneumonia.

The streptococcus infections vary so much in the clinical aspects that it is almost impossible to make a diagnostic syndrome. Thus in a simple case of laryngitis with some mucopurulent expectoration without febrile symptoms it was found to be the only germ present. On the other hand, some very severe cases of tonsilitis and bronchitis show only this microorganism in the secretions.

Cases of glandular fever were rather common this winter. The diagnosis rests on the presence of numerous enlarged post-cervical lymph nodes and enlarged nodes along the sternochlido mastoid; also enlarged nodes in the axilla, groin and other regions. There is very high fever as a rule, which has repeated elevations, although it may end by crisis in two or three days. The liver and spleen are usually enlarged. Pain in the abdomen is a common symptom.

In conclusion, I wish to warn practitioners to be cautious in diagnosticating grip when no microscopical examination of the secretions has been made.

SOME REMARKS ON BACTERIA IN THE DEAD BODY.

By R. B. H. Gradwohl, M. D., Coroner's Physician, St. Louis, Mo.

In addressing a body of medical men upon a question of this kind, some may rightly ask, of what practical value is the search for bacteria in dead bodies? I might say in reply that at one time it was supposed that the bacteriological examination of the blood of dead bodies would throw considerable light on the etiology of disease; in fact, the first work in the direction of finding the now-acknowledged specific bacteria of specific infectious diseases was carried out with such dead material. To those of you who have followed the literature upon this subject, it is known that there are many who still believe that valuable information as to etiology can be obtained from the blood of cadavers.

The vital point in the investigation of the blood of dead bodies from a bacteriological standpoint is to determine if possible just what role is played by the several bacteria that we find in the cadaver in causing death; secondly, in what percentage of these cases are the bacteria present, microorganisms, that enter the blood sub finem vitæ or post mortem. Consid-

erable skepticism has prevailed concerning the investigation of bacteria in dead bodies for the reason that many argue that during the last moments of life and immediately after death there is an invasion of the body by the different bacteria of decomposition, and that consequently any attempt to prove that a given bacteria found in the dead body is the cause of death would be necessarily futile. But recently a controversy has waxed warm between Simmonds, of Hamburg, and Canon, of Berlin. Simmonds, in an exhaustive thesis published in Virchow's *Archiv*, Band 175, Heft 3, gives the results of his investigations in a search for bacteria in the heart's blood of 1,200 cadavers. From these results he comes to the conclusion that considerable data can be obtained by a systematic search for bacteria in the blood of cadavers. His work consisted in the main in making cultures from the heart's blood of these subjects. He claims that the bacteria which he demonstrated in the heart's blood were not bacteria that had migrated from other parts of the body after death, but that they were the essential bacteria that could have been found free in the circulating blood during life. The autopsies in these cases were performed from twelve to thirty-six hours after death; in a few cases they were performed even later than that. Yet the investigator claimed that there was little if any post-mortem invasion of bacteria. In over one-half of the cases, bacteria of one kind or another were found. In 95 per cent. of the cases but one variety was found, and that the streptococcus. The cause of death in these cases in which the streptococcus was found was: Scarlatina, 88 cases; diphtheria, 38; phthisis, 28; erysipelas, 25; phlegmonous cases and phlebitis, 29; pyemia, septicemia, malignant endocarditis, 38; and various purulent conditions, 62. Simmonds states that in chronic alcoholism, leucemia, pernicious anemia, diabetes, marasmus senilis, chronic diseases of the nervous system and of the circulatory apparatus, blood examinations were negative save where complications had supervened to cause death.

Somewhat of a damper is thrown upon this exhaustive undertaking by the publications of Canon, the latest of which appeared in the *Centralblatt fuer Allgemeine Pathologie und Pathologische Anatomie*, Band xv, No. 4, 1904. Canon claims that the work of Simmonds is faulty in that he used the heart's blood for his material instead of blood drawn from one of the peripheral veins, such as the median basilic. Canon states that parallel cultures taken at the same time from the peripheral vein and from the heart's blood in given cases will show wide differences—*i. e.*, that no bacteria will be found in the venous blood from the arm, and many bacteria will be found in the heart's blood. He claims that the bacteria which are found in cultures from the heart's blood in nearly all cases represent micro-organic migrations from nearby organs, principally from the lungs. The fact that Simmonds found the streptococcus so frequently in cases of lung tuberculosis in the heart's blood only, seems to strengthen Canon's contention that these tuberculous patients frequently harbor numerous areas of streptococci in

their broken-down lungs, and that they migrate during the agonal or post-mortal state in the nearby heart's chambers. Canon believes that reliable information can be obtained from bacteriological work on dead bodies, but not from cultures of the heart's blood. He declares that he has good reason to believe that not only bacteria of decomposition first begin their work in the heart, but that by reason of the heart's close proximity to the lungs, liver and abdominal organs, the bacteria which inhabit these locations will quickly and naturally drift to the heart sub finem vitæ or post-mortem, and thus obscure bacteriological investigations. A very good case illustrative of this point[1] is given: A man whose lower leg was crushed in an accident had his thigh amputated at the hip joint; he died of pyemia. Blood examination of the vein on the arm, before and after death, was negative. Autopsy twenty-four hours after death showed gangrene of part of the lung following infarct. Examination of the heart's blood gave numerons bacteria of decomposition and streptococci. These bacteria entered the heart from the lung, beyond doubt, as there were no free bacteria in the circulating blood during life. Eiselsberg[2] has demonstrated similar findings within ten minutes after death in cultures from the heart's blood.

Further support is given the view of Canon by the investigations of Achard and Phulpin[3] who studied forty-nine cases; they used blood from the arm veins and blood obtained by puncture of the liver, also heart's blood, with bacteriological study of the liver and spleen at autopsy. In eight cases no bacteria were found in the venous blood from the arm, while bacteria were always present in blood obtained by puncture of the liver. In six of these eight cases, the blood in the heart was sterile during the first ten hours after death; eighteen to twenty-four hours after death, the same bacteria were found in the heart's blood that were found in the blood aspirated from the liver (colon bacilli, staphylococci and bacteria of decomposition.) In other cases, they found in the first few hours after death the same bacteria in the heart's blood that were found in the blood from the arm; yet cultures from the heart a few hours later gave also bacteria of decomposition.

Prompted by the work of these investigators and by the results of Wurtz[4], Beco[5], Chvostek[6], Hauser[7] and Birsch-Hirschfeld[8] upon animals, I undertook a series of cultures to determine just what bacteria are found in these dead bodies after death. My cases were those upon which I performed autopsies at the direction of the Coroner of this city, Dr. R. M. Funkhouser, by whose courtesy I beg to report my results. I believe that possibly more tangible information can be obtained from some of these cases than from the work of either Simmonds or Canon on account of the fact that I examined these bodies very soon after death. Owing to the laws in force in Germany, bodies must be held for a certain number of hours before an autopsy can be performed. Although Simmonds maintains that the keeping of his bodies in the cellar of the dead-house of the hospital in a cool place tended to prevent any decomposition, I maintain that the best

results in this line of work are to be obtained by getting into the body as soon after death as possible. Another advantage that goes with my cases is the fact that our bodies are kept in the admirably equipped cold-storage plant at the city morgue, which in my opinion is easily superior from a refrigerative standpoint to the "cool cellar" of the German dead-house, where ice is unknown. My results cover bacteriologic examinations of both the venous blood from the arm and the heart's blood from fifty cases. The blood was drawn from the median basilic vein in the manner of taking cultures from the living, plating in liquified agar and incubating at the ordinary temperature. The heart's blood was taken according to the method described by Schottmueller[9]: after opening the pericardium, part of the presenting surface of the right ventricle is sterilized by a hot knife-blade, a sterilized canula inserted into the ventricle and blood drawn up through a sterilized syringe attached thereto, several drops, from one to thirty, poured into tubes of liquified agar, agitated and then poured on sterile Petri dishes for incubation. I wish to state that autopsy was performed in some cases as soon after death as two hours.

The cause of death in my cases was as follows:

Cases 1–7.—Seven cases of gun-shot wound (3 of chest, 2 of abdomen, 2 of head.)

Case 8.—One case of fracture of frontal bone and hemorrhage into brain.

Cases 9, 10.—Two cases of fracture of the base of skull.

Cases 11-20.—Ten cases of valvular disease of the heart.

Cases 21–23.—Three cases of hemorrhage from rupture of aortic aneurysm.

Case 24.—One case of oxalic acid poisoning.

Case 25.—One case of pyemia following injury.

Cases 26–29.—Four cases of croupous pneumonia.

Case 30.—One case of peritonitis following stab-wound of intestines.

Case 31.—One case of compound fractures of the skull.

Case 32.—One case of carcinoma of breast and liver.

Cases 33, 34.—Two cases of purulent peritonitis following criminal abortion.

Cases 35, 36.—Two cases of traumatic pneumonia following fractures of ribs.

Case 37.—One case of gun-shot wound of thigh, amputation and septicemia.

Case 38.—One case of still-born child.

Cases 39–41.—Three cases of fatty degeneration of heart.

Case 42.—One case of morphine poisoning.

Case 43.—One case of cerebral meningitis.

Case 44.—One case of peritonitis following perforation of typhoid ulcer.

Cases 45–50.–Six cases of nephritis.

The seven cases of gun-shot wound resulted in almost instant death. Bacteria as follows were found:

	Case.	Hours After Death of Autopsy.	Bacteria in Heart's Blood.	Bacteria in Arm-Vein.
1	Gun-shot	4	streptococci	negative
2	"	6	streptococci staphylococci	negative
3	"	2	negative	negative
4	"	4	negative	negative
5	"	8	streptococci	negative
6	"	10	proteus vulgaris staphylococci	negative
7	"	3	streptococci bacillus subtilis B. pyocyaneus	negative
8	Frac. front bone	7	streptococci	negative
9	Frac. base skull	5	negative	negative
10	" " "	8	streptococci staphylococci colon bacilli	negative
11	Valv. dis	3	negative	negative
12	" "	7½	staphylococci	negative
13	" "	9	colon bacilli B. mesentericus	negative
14	" "	6	streptococci colon bacilli B. subtilis	negative
15	" "	6	proteus vulgaris	negative
16	" "	10	streptococci	
17	" "	3	negative	negative
18	" "	2½	staphylococci	negative
19	" "	8	colon bacillus	negative
20	" "	4	streptococci	negative
21	Aortic aneurysm	6	colon bacilli staphylococci	negative
22	" "	7	streptococci B. subtilis	negative
23	" "	3	negative	negative
24	Oxalic acid poison	11	streptococci	negative
25	Pyemia	8	staphy. p. aureus	staphy. aure
26	Pneumonia	5	pneumococci streptococci	negative
27	"	6	negative	negative
28	"	7	streptococci B. subtilis staphylococci	negative
29	"	4½	streptococci	negative
30	Peritonitis	5	staphylococci colon bacilli	negative

	Case.	Hours After Death of Autopsy.		Bacteria in Heart's Blood.	Bacteria in Arm-Vein.
31	Cmpd. fracture skull	2	.....	streptococci	negative
32	Carcinoma	5	.....	colon bacilli B. subtilis	negative
33	Peritonitis abortion	3	.....	streptococci staphylococci	streptococci
34	" "	7	.....	colon bacilli staphylococci	negative
35	Traum. pneumonia	5	.....	negative	negative
36	" "	8	.....	colon bacilli pneumococci streptococci	negative
37	Septicemia	4	.....	streptococci	streptococci
38	Still-born	8	.....	staphylococci	negative
39	Fatty heart	6	.....	negative	negative
40	" "	3	.....	streptococci	negative
41	" "	9	.....	colon bacilli proteus vulgaris	negative
42	Morphine	5	.....	negative	negative
43	Meningitis	4½	.....	streptococcus	negative
44	Typhoid peritonitis	3	.....	colon bacilli	negative
45	Nephritis	10	.....	staphylococci streptococci	negative
46	"	8	.....	staphylococci B. subtilis colon bacilli	negative
47	"	7½	.....	B. pyocyaneus streptococci	negative
48	"	9	.....	streptococci sarcina lutea	negative
49	"	3	.....	negative	negative
50	"	8	.....	streptococci	negative

An analysis of this table will show that in these fifty cases, cultures from the heart's blood gave positive bacterial findings in thirty-nine cases, and negative in eleven cases. In other words, in 78 per cent. of the cases bacteria were found in the heart's blood, even though every evidence pointed to the fact that they were not present in the blood during life. It must be remembered that in several cases autopsy was performed as early as two and three hours after death, and yet bacteria were present. On the contrary, negative findings were the rule in cultures from the vein of the arm except in a few cases where there was a history of general sepsis before death, and in such cases the same bacteria were found in this venous blood as were found in the pus from the site of infection. This constant negative finding in the blood from the median-basilic vein shows

that in this situation there is no post-mortem migration of bacteria. The almost constant finding of streptococci and colon bacilli in the heart's blood in these cases indicates that they migrated into the heart from the nearby organs, lungs, liver and intestinal canal during the last moments of life or immediately after death. Streptococci were found in the heart's blood in twenty-four cases—*i. e.*, in 48 per cent. of the cases. Consequently but little, if any, reliable information can be obtained from a post-mortem bacteriological examination of the heart's blood.

I believe that valuable information can be obtained from a bacteriological examination of the blood drawn from the median-basilic vein after death. For instance, Canon has repeatedly pointed out that in medico-legal cases the pathologist is at a loss to find a lesion which will account for death. All the vital organs appear normal. A bacteriological examination of the blood from the arm will show a streptococcus infection which has left no marks of identification on the vital organs examined with the naked eye.

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AN ANALYSIS OF LAST YEAR'S WORK IN THE MUNICIPAL DISPENSARY OF THE CITY OF ST. LOUIS.

By Henry J. Scherck, M. D., St. Louis, Missouri.
Chief Dispensary Physician.

Inasmuch as I am limited to twenty minutes in discussing the various work accomplished by the dispensary in the city of St. Louis, my remarks must of necessity be very brief, hence for the most part I will confine myself to figures and facts.

During the year a grand total of 41,474 patients were treated by the physicians connected with the dispensary service. Of this number 21,731 were medical cases, and 19,743 were surgical cases. It is interesting to note in this connection what were the most prevalent diseases and injuries encountered. Diseases of the respiratory apparatus claim first place. There were over 4,000 cases of bronchitis, pneumonia and pleurisy. Fevers of various kinds were next in point of prevalence, there being over 3,000 cases handled.

Among some of the interesting conditions met with might be mentioned the following:

The large number of bites treated—*e. g.*, fifteen cat bites, three hundred and sixty-six dog bites, seventy-four insect bites, fourteen horse bites, eighteen rat bites and the bites inflicted by individuals on others, thirty-four. Where we have reason to suspect that the bites inflicted by dogs were produced by animals suf-

fering from rabies we have advised and practiced, where possible, the injection of the serum against rabies.

Four hundred and fifteen foreign bodies were removed from various parts of the anatomy of individuals applying for relief. It is remarkable how many various objects are utilized for this purpose, and what portions of the anatomy are used as receptacles for these foreign bodies. Among the surgical conditions, naturally the majority of the patients apply suffering from some form of wound, either incised, lacerated or punctured, the result of fights or accidents. No less than five hundred and thirty-one gunshot wounds were examined, treated and disposed of during the year, while there were 6,000 incised and lacerated wounds. The face and scalp was the seat of the location of most of these wounds. Naturally among the poorer and criminal classes we have been called upon to handle a very large number of drug habit cases. The number of morphine and cocaine fiends being very much larger than one would expect. This is due in a great measure to the facility with which anyone can procure these drugs from the various irresponsible drug stores situated in our downtown district. There were over one hundred of these who have applied for relief during the year. Inasmuch as the winter was very severe, frostbites, some of them very severe, were quite frequent. No less than three hundred cases applied. We find that the local application of ichthyol gives as prompt relief as anything we have tried.

There were over six hundred cases of various skin diseases, eczemas being the most common form and usually secondary to pediculosis.

During the year two hundred and twenty-eight cases of smallpox were sent by the chief dispensary physician to quarantine. Of course, in locating this number many cases were examined which proved to be suffering from other diseases than variola. Of the two hundred and twenty-eight cases sent to quarantine suffering with variola, two hundred and twenty-seven recovered. Only one died. There were one hundred and eighty-eight white and forty colored, one hundred and fifty-six males and forty females. The disease was contracted within the city in one hundred and seventy-nine cases; forty-nine cases were imported here. Of the two hundred and twenty-eight cases one hundred and ninety-nine had never been vaccinated; twenty-one showed poor marks while only nine showed a fair mark.

These figures should convince the most skeptical of the value of vaccination. It was also noted on those who developed the disease, and who had marks of previous vaccination, that in no instance had the vaccination been done as recently as fifteen years, and the majority were twenty-five years old. It is surprising in the conduct of a large city dispensary to note the large number of cases that are picked up upon our thoroughfares and brought to us for observation to determine their mental responsibility. During the year there were six hundred and eighty-two cases brought to my attention by the police department. Of this number two-thirds proved to be insane and have been committed to the insane asylum.

It is noteworthy in this particular to call attention to the number of cases occurring during the months of March, April, May, June and July as compared to the rest of the year, there being about twice as many during these months. Whether the heat, or the combination of heat and alcohol is the cause of this condition I am not prepared to say, but it seems likely that it has some bearing on the condition.

Connected with the central dispensary we have what is termed our vaccine corps of physicians. These gentlemen have been directed to vaccinate wherever required. In this particular it might be of interest to call your attention to the system in vogue in regard to following up the cases of smallpox and the protection thrown around those who may have come in contact with a case. As soon as a case of smallpox is discovered, the complete history of the case is immediately gotten, the name, color, age, etc., together with the residence and length of time the patient has been in the city, and made a note of. The vaccinal history is carefully gone into, whether the patient has ever been vaccinated, or if he has been, whether he shows a poor, fair or good mark, and the length of time he claims has elapsed since vaccination was successfully performed. A note is also made of the time when the patient was first taken ill and the date when the eruption first appeared. The name, residence and employment and name of employer, and of each and every person who has come in contact with the patient, is carefully noted on what is termed a verification sheet. One of the vaccine physicians is then detailed to visit each one of these exposures to inspect him and to vaccinate if necessary. A record is kept of all this and a card filed bearing the name of the individual exposed. From the 10th to the 15th day after exposure the vaccine physician revisits him and takes his temperature each day. If during the danger period he develops a temperature, he is closely watched, and upon the first evidence of any eruption is brought down to the isolation ward and from there sent to quarantine, if the disease develops. In this way we have been able to gather cases that probably otherwise would have escaped our attention.

It is interesting to note, too, that exposures that have been vaccinated within four or five days after exposure, have in the large majority of instances escaped the disease, and those that have been vaccinated between the 5th and the 8th day successfully, have shown a very much modified form of the disease, if it developed. Besides these vaccinations it is our custom to vaccinate every prisoner brought to the city jail. In this way we have vaccinated eight hundred and fifty-six prisoners. The tenements, mercantile establishments and hotels have also received our attention and a very large number of their employes have been vaccinated.

At the beginning of each school year we send a physician to the various public schools to inspect and vaccinate where necessary. Last year 6,936 school children were vaccinated and many more inspected. We have advocated the careful vaccination of the employes of the large factories, street car companies and other establishments employing large numbers

of men. This has been taken advantage of by most of these concerns with gratifying results. I am fully convinced that the small number of smallpox cases in our city is entirely due to the energetic manner in which this branch of the department is pushed.

There are connected with the various dispensaries about twenty-odd ambulances, which convey the sick and injured to either the dispensaries or hospitals. An innovation in the shape of ambulance surgeons has been adopted during the last year. These gentlemen accompany the ambulances on their trips when answering calls to surgical or medical emergencies. Much good has resulted from this, as quite a number of poison cases have been attended to on the spot and stomachs thoroughly washed out and antidotes given. Cases of hemorrhage have been controlled and fractures temporarily cared for, so that their ride has not at least injured the conditions in any way. Besides that, the antiseptic dressings have been applied to prevent any further infection of wounds. This, I believe, is one of the best additions to the ambulance that could possibly be adopted.

During the year there were 12,678 different calls made by the ambulances. In doing this it was necessary for them to cover 50,000 miles of streets. There is no doubt that in the future automobile ambulances will take the place of our present method. The average number of calls made by the ambulances per month ranges between eight hundred and nine hundred and fifty, and does not seem to vary to any appreciable extent, the number being a trifle less in winter than during the summer months.

The foregoing rather disconnected statements of our work will, at least, give you an idea of the immense amount of work accomplished by the Municipal Dispensary Department. It will be a pleasure to demonstrate any of the branches of our department to the members of the Missouri State Medical Society, if they care to call on me at our Health Department.

HYPERACIDITY.

By John M. Bell, M. D., St. Joseph, Mo.

In all the domain of applied therapy there is no field requiring such great care in diagnosis and accuracy of procedure as that which is directed against pathologic conditions of the stomach. To get anything like results, one must know just what to give, and the best time to give it, and why it is given. Shotguns have no place in stomach therapeutics. Here, as elsewhere, diagnosis determines much the brilliancy of results, but even before diagnosis comes a thorough, clear, close understanding of the physiology of digestion, a much closer one than the average physician gives the subject. The proposition is not merely that digestion is impaired, but which step of digestion is at fault. From a therapeutic standpoint, dis-

eases of the stomach may be divided clearly into three classes. First, those of hyperemia; second, those of anemia; third, organic diseases with accompanying anatomic changes. Nervous dyspepsias are not entitled to a distinct subdivision, since they array themselves under those of the first two groups. Group one, hyperemia, will include all those conditions in which the stomach is overdoing itself. From incessant irritation, be it nervous or from improper food, overeating, faulty mastication or use of stimulants (alcohol or condiments), an excess of blood is attracted to the organ. The glandular element is over-stimulated, an excess of gastric juice is present and peristalsis is exaggerated. Group two, anemia, includes conditions just the reverse, with glandular structure normal, but, from insufficient blood supply, inactive. It may be from nerve innervation, general or local anemia or general atonicity. Such conditions are characterized by a lack of gastric juice and insufficient peristalsis. Group three includes anatomic diseases, ulcer, stenosis, cancer, dilatation and such diseases which may exist as a terminal product of a long continued member of group one or two, or arise from a pathogenesis outside the stomach.

Hyperacidity, the subject today, represents typically group one, the most common of the series and the farthest reaching in sequellæ. If not checked, it terminates in glandular atrophy or develops a persistent ulcer. It is a prevalent condition, diagnosed as dyspepsia, usually treated in a way calculated to disgust the stomach and mortify the physician, because it is a disease in which the inevitable tonic, strychnia, pepsin and H. C. L., is particularly contraindicated, and yet that is what it gets, and that is why it does not recover.

The condition may be summed up in a word—overstimulation—the immediate result of which is undue glandular activity. The oxyntic glands secrete too much H. C. L., peptic glands, pepsin, etc. It is common in this country because of our strenuous, restless life. A natural sequence incident to high-strung nervous tension. It is the dyspepsia of nervous people, partly because the stomach participates in the nervous exaltation of the body, but more so to the fact that such people masticate poorly. They bolt their food. It is common among gormandizers, those who consume much whiskey or highly seasoned food or too much rich food, existing as an early step in the genesis of chronic gastritis. The condition is characterized by gradual but persistently increasing discomfort after meals. As Butler puts it, "Into a state of health a sensation of epigastric uneasiness intrudes, deepening into pain, and shortly followed by nausea and acid vomiting, sometimes becoming bile stained." At first a mere uneasiness, one or two hours after meals, it develops into a burning pain, with belching, gaseous rumbling and pyrosis. Headache and vertigo are common. The pain is relieved by vomiting, by taking alkalis, magnesia or soda, or by taking animal food. The latter phenomenon is explained by the fact that animal albumen requires more H. C. L. for its conversion into albumose than does vegetable albumen, hence it utilizes the excess of acid. Loss of weight is not

common. On examination, a diffuse gastric tenderness is observed. Examination of gastric contents reveals an excess of H. C. L. and an absence of acetic, butyric or lactic acids. The absence of these organic acids is necessary to distinguish from impaired peristalsis, another form of dyspepsia also common, but differing widely in pathology and treatment. Hyperacidity may be intermittent, periodic or incessant. In well marked cases H. C. L. may be detected in the water brash eructations between meals as well as on a full stomach.

There is one definite method by which hyperacidity may be distinguished from other stomach diseases, accompanied with sour belching, namely, analysis of stomach contents. Nor is the use of stomach tube necessary The vomited matter serves the purpose admiraby. In hyperacidity the sour factor is H. C. L., the acidity of sour belching that comes from dilatation, stenosis and malignant diseases being lactic acid.

The diagnosis is misleading, because the tongue is usually clean and the appetite good. The recognition and correction of hypersecretion is of vital importance to the patient, since, if allowed to continue, gastric ulcer or chronic gastritis develops in a certain percentage of cases.

In the way of treatment, the best results are obtained by regarding the disease as one of the body in general and not purely a local one. Treatment must aim to calm high nervous tension to secure greater repose of the individual as well as of the stomach. Stimulating factors of the daily life must be eliminated, fewer hours of work, more for recreation. More sleep. Alcohol and tobacco must be cut out. At the table the food must be bland, unirritating; all condiments are to be interdicted—pepper, mustard, horseradish, ginger, spices in general—even salt must be cut down to the lowest possible point. In fact, such cases do best by using no salt at all, except the chlorides, which naturally exist in food stuffs. While such a diet at first seems flat, the relief obtained by it is full compensation for the deprivation. Extremes in temperature are to be avoided, no iced drinks nor hot soups. Such cases recover best by realizing that they must eat only to live, the palate is not to be consulted. By such means—purely hygienic—mild cases will entirely recover with gastric equipoise and a healthy appetite. Severe cases demand other measures. Meals are to be taken with no fluid whatever—perfectly dry. This has the advantage of compelling mastication and diminishing the bulk of the stomach contents. Water is to be allowed an hour after meals. The diet to consist largely of proteids, milk, eggs and meat. This is preferable, because animal albumens appropriate a larger percentage of H. C. L. in being converted into peptones than do vegetable albumens. A carbohydrate diet is preferred by some authorities because of its soothing effect on the mucosa. An ideal measure is the administration of twenty grains of magnesia calcined or ten of soda bicarb. in hot water thirty minutes before the meal, to neutralize the excess of acid already secreted, then in fifteen minutes, which is still fifteen minutes before the meal, one-fourth grain of nitrate of silver and one-fourth grain of extract of belladonna, the silver to

allay hyperemia and the belladonna to have an inhibiting action on the excessive gland activity. This has another happy faculty, the excess of acid and the resulting hyperemia augments peristalsis to such a degree that the stomach contents are impelled onward before digestion is completed and before the secreted gastric juice has exhausted itself, leaving the stomach in a condition of unrest, with a sensation of hunger soon to follow. Such cases are always eating. The treatment above outlined has the advantage of subduing the pathologic condition existing as well as tending to prevent its recurrence. Between times, alkaline waters may be taken at pleasure. Cathartics must be used for some time; the alkaline ones are preferred for obvious reasons. Exercise in the open air and daily cool bath are to be advocated. The condition tends to become chronic and persistent efforts must be kept up. The method outlined above has proved itself reliable in my hands.

DISCUSSION.

HOME AND SANITARIUM TREATMENT OF TUBERCULOSIS.

By Dr. Wm. Porter.

Dr. W. McNabb Miller, Columbia, Mo. :—I have considerable interest in this problem. I think Dr. Porter has struck the keynote in the problem of home treatment of tuberculosis, when he says that if the patient cannot be taken to a sanitarium the home should be turned into a sanitarium. If Mahomet cannot go to the mountain, the mountain must come to Mahomet.

The origin of the disease depends on two factors: The susceptibility of the patient and the possibility of infection. We can make him less susceptible and we can control the danger of infection. We read much of the benefits of the open air, sleeping on the porch, under the open sky, etc., but I think the moment the home is turned into a sanitarium, where the patient is made perfectly comfortable, the battle is half won. Let us bring into the room a sufficient quantity of fresh air and the problem is solved. Of course, rest and nutrition must go with it.

Another thing is, it is said the air should be moist. I do not see why it should be moist. It was once my privilege to live for eleven years in the great basin of Salt Lake, and in that eleven years I never saw a case of tuberculosis develop there. This was due to the purity of the air and the great amount of ventilation in that community. They have houses constructed after the most modern fashion, with perfect ventilation.

Autopsies show that the disease is curable. Perhaps 95 per cent. of cases that come to the table will show some indication of tuberculosis. In almost all cases I find some point that will show evidence of the patient having had tuberculosis. This disease is not only preventable, but it is curable. Let us teach the people of our country these facts.

THERAPEUTICS OF TUBERCULOSIS.

By Dr. N. P. Wood.

Dr. Robert M. Funkhouser, St. Louis: There is perhaps no disease that comes before the public that more urgently demands treatment than tuberculosis, and there is no treatment better than plenty of fresh air, plenty of nourishing food and occupation on the part of the patient. The essayist has treated the subject so admirably that I do not feel I can add anything to it. What he has said in reference to hemorrhage I would emphasize. I believe the pivotal point is in connection with narcosis, but some of the astringents are sometimes indicated, as ergot, tannic acid, etc. In the treatment of some severe cases that I saw in connection with my friend Dr. Bauduay, I believe that the administration of the narcotic saved the life of the patients.

As to the serum treatment, I have lost faith in it. If we gain anything in this struggle it will be from prophylaxis and from anticipation. I endorse heartily what the essayist has said in regard to the time, which cannot be far distant, when tuberculosis will be a disease of the past, and as it decreases, I believe, we will at the same time have an increase in diseases of the kidney. I have seen some cases in which the diseases were combined, and the treatment is very difficult, for the treatment indicated in one condition is not beneficial in the other.

JOURNAL

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EDITORIAL.

THE PRESIDENT'S ADDRESS.

Many letters have been received from members throughout the state requesting copies of the president's address. At the last annual meeting Dr. Williams introduced a motion to have printed 2,000 extra copies for distribution among non-members. The publishers have just delivered to the secretary the reprints, and to those making the request copies will be promptly forwarded. This address should be specially valued for the Judicial Council in those districts where new societies are to be organized. Dr. Williams, of New York, editor of the *Druggist Circular*, writes congratulating our worthy ex-president, Dr. Wm. G. Moore, upon his position relative to patent medicines and requests copy of the address that he may publish in full.

AN OUNCE OF PREVENTION.

To combat the scourge of pneumonia in New York City, the board of health has planned to wage a thorough and far-reaching crusade. Its request for a special appropriation of $10,000 was granted by the board of estimate and apportionment. This fund will be used to defray the expenses of a medical commission to be appointed by the board of health for the purpose of investigating the causes of acute respiratory diseases and to suggest the remedies to be applied for their prevention. The members of this commission are to be selected from the most eminent physicians and bacteriologists in the country, those whose experience and investigations have fitted them to be of particular service in the work.

The deaths from pneumonia from January 1 to July 1, 1904, numbered 5,498, which was 1,683 more than during the same period of 1903. The deaths from bronchial pneumonia during those months numbered 2,762 for 1904, an excess of 859 over 1903, and the deaths from acute bronchitis were 1,137, which was 228 more than for the same months of 1903.

QUOSQUE TANDEM ABUTERE PATIENTIA NOSTRA?

The resolutions which were passed by the Missouri State Medical Association at the annual meeting and forwarded to the governor and to the commissioners of the World's Fair in which the modest sum of one thousand dollars was asked for the purpose of acquainting the people through an exhibit with the causes and effects of diseases in man, has not as yet been considered as worthy of an answer, although unofficially it is learned that the request has been "turned down."

In the St. Louis *Republic* of July 24th, we read the gratifying information that of the one million dollars appropriated by the legislature for the use of the Missouri World's Fair Commission there remains unexpended $311,977.58. It would appear, therefore, that the depleted treasury of the commission did not furnish the strongest argument for refusing the request.

We regret greatly that Governor Dockery, who was a medical man and who should take a broad view of questions concerning science and scientific experimentation and the diffusion of useful medical and scientific knowledge among the people, did not see fit to avail himself of the opportunity which the commission presented to him and act as the representative of the medical profession in urging the very reasonable appropriation asked by the committee.

For the information of the members of the association, we wish to state that the money has been raised by private subscription among the physicians of the state. Missouri will not have as extensive an exhibit as our neighboring state, Illinois, but it will have such an exhibit as the doctors can make unaided by the state.

The practical lesson to learn from this failure to secure a thousand dollars out of the one million for medicine is that it will be necessary for each county society to read the resolutions passed in St. Louis to the candidates for the house and for the senate from the respective counties and to learn from them what attitude

they will assume in the general assembly towards matters relating to the public health and to scientific medicine.

In our next issue we will analyze the expenditures of the Missouri State Commission for the benefit of the six thousand physicians of Missouri.

NEWS ITEMS.

EXHIBIT OF MOSQUITOES AT THE ST. LOUIS FAIR.

Dr. Frederico Torralbas, a member of the Havana Supreme Board of Health, will exhibit a large number of mosquitoes, which he has brought from Cuba for the purpose of illustrating the theory of the transmission of the yellow fever germs. Dr. Torralbas will also erect a series of tents at St. Louis, provided with wire screens, the same as were used when the American and Cuban surgeons made a series of experiments to show that yellow fever germs can only be propagated by mosquitoes biting human beings. Men will be employed for a practical demonstration.—*Medical Record.*

POSTAL WAR ON CURE-ALLS.

Silence on the part of the newspapers greets the announcement that the Post-Office Department is going to help them exclude from their columns the advertisements of quack remedies. The postal authorities have decided to deny the use of the mails to concerns that sell fraudulent patent medicines, and will also exclude newspapers that advertise them. "All reputable newspapers will be glad to help in this work," says an official of the department; and the reputable newspapers reply—nothing. A careful search of our exchanges reveals only three comments. The postal plan is briefly outlined as follows by the Washington correspondent of the New York *Tribune:*

"With the assistance of government scientists, the department seeks to bar from the use of the mails the host of patent medicine concerns and exploiters of proprietary medicines and nostrums which chemical analyses show are incapable of performing the wonderful cures claimed for them. On the list are preparations which purport to cure dipsomania, yet contain large percentages of alcohol, some of which are vended as harmless, but are found to be deleterious; others which are advertised as 'consumption cures,' but contain no recognized remedy for tuberculosis, and still others which are sold as restoratives of vitality, but which are entirely incapable of accomplishing any such result.

"Although this work is still in the initiatory stage, sufficient evidence has already been discovered to warrant the conclusion that many of the widely advertised patent remedies, 'favorite prescriptions,' vegetable compounds, kidney cures, stomach bitters, etc., are rank frauds, which cannot be of any benefit whatever, too often relying on alcohol to produce temporary exhilaration and likely to lead eventually to chronic alcoholism.

"Government control of the mails makes the Post-Office Department absolute master of the situation, with power to exclude from the use of the postal service every letter addressed to and every circular sent out by a concern which, in the opinion of the Postmaster-General, is conducting a fraudulent business, and to go even farther and exclude from passage through the mails every newspaper or other publication which, once a fraud order has been issued, persists in carrying the advertisement of the concern so excluded. No legal proceedings are necessary to accomplish these ends, and the entire burden of proof rests on the proprietor of the patent medicine or the concern to which the use of the public mails was forbidden. For that reason, it is believed, it will not prove difficult to drive out of business the individuals and institutions which seek to delude and defraud the public, while the department, after careful investigation of the subject, is convinced that the 'patent medicine fake' is a greater humbug than any of the 'get-rich-quick' concerns which have thus far been excluded from the use of the mails."

The department, we are told further, "has already investigated and decided nearly one hundred of the most flagrant of these cases."

The Hartford *Times* alone commends the plan heartily. It says:

"If this undertaking is carried out thoroughly and at the same time the government inquiry into frauds in foodstuffs is continued, and as much energy shown in stopping adulteration as in discovering its existence, a general reform will be set on foot, the importance of which it is hardly possible to overestimate. And the consternation and wrath of that portion of the community which makes its living by preying on its fellow-citizens through such frauds will be in proportion to the actual service rendered to the rest of the people of the country.—*Literary Digest.*

NEW MEMBERS RECEIVED.

T. B Turnbaugh, Bloomfield, Stoddard county; T. B. Wingo, Dexter, Stoddard county; D. R. Corbin, Bloomfield, Stoddard county; S. M. Evans, Bloomfield, Stoddard county; T. C. Allen, Bernie, Mo., Stoddard county; H. S. Winters, Acorn Ridge, Stoddard county; A. D. Hill, Dexter, Stoddard county; Elden Phillips, Bloomfield, Stoddard county; L. Burris, Puxico, Stoddard county; J. P. Brandon, Essex, Stoddard county; J. H. Bilbrey, Puxico, Stoddard county; W. C. Caldwell, Essex, Stoddard county; John Ashley, Bloomfield, Stoddard county; J. A. Tiller, Leora, Stoddard county; E. A. P. Briney, Bloomfield, Stoddard county; G. W. Vernon, Dexter, Stoddard county; J. D. Moulder, Puxico, Stoddard county; Harry La Rue, Dexter, Stoddard county; J. L. Slayden, Dexter, Stoddard county; A. R. A. Davis, Dexter, Stoddard county; C. L. Parkhurst, Houstonia, Pettis county; L. S. Mayfield, Puxico, Stoddard county; John Douglas, Dexter, Stoddard county; C. O. Shanks, Wayland, Clark county; F. W. Foster, East Lynne, Cass county; Berry, W. A., Unionville, Putnam county; Nulton, Ida May, Livonia, Putnam county; J. T. Coffee, Steelville, Crawford county; Walter S. Cox, Cuba, Craw-

ford county; Wm. J. Bamber, Wilson Mills, Crawford county; W. A. Metcalf, Steelville, Crawford county; Clarence Metlock, Steelville, Crawford county; A. H. Horn, Steelville, Crawford county; Horzog, C. C. A., Cuba, Crawford county; D. C. Jones, Poplar Bluff, 107 Main street, Butler county; J. W. Mason, Laclede, Linn county; C. W. Guss, Hannibal, Marion county; A. L. Shanks, Hannibal, Marion county; A. E. Lyle, Butler, Bates county; E. G. Zey, Butler, Bates county; F. Hulett Richards, Rich Hill, Bates county; Grosshart Ross, Rockville, Bates county; E. N. Chastain, Rich Hill, Bates county; V. J. Cumpton, Pleasant Gap, Bates county; G. A. Delamater, Rich Hill, Bates county; W. H. Knott, Hume, Bates county; H. W. Lancaster, Rich Hill, Bates county; H. A. Rhoades, Foster, Bates county; W. H. Allen, Rich Hill, Bates county; J. S. Amyx, Amsterdam, Bates county; C. B. McNarry, Rockville, Bates county.

Kansas City is to have a new, well-arranged, fire-proof city hospital, to cost $225,000.

Dr. Leander F. Murray, of Holden, had his shoulder dislocated and scapula fractured last month in a runaway accident.

A case has recently been decided at Hamburg in which the central telephone girl sued a physician for injury to her head and ear from his persistently turning the crank in calling the central. This produced such a strong current that she was temporarily disabled. He was telephoning home in respect to an urgent case, but was told his home wire was in use—"busy; call again"—although it was brought out at the suit that his telephone had not been used during that hour. He was condemned to a fine of $7.50 or three days' imprisonment.

Dr. Bransford Lewis, while riding in his automobile June 25th, was severely injured by a collision with a team of brewery horses. The doctor is confined to his bed at his home, 4393 Lindell boulevard.

Dr. Luedking announces that it has become possible for the Washington University to erect a modern hospital building of one hundred beds at Jefferson and Lucas avenues, on the present site of the Polyclinic building.

An attendant at the University clinic at Lemberg recently sued Dr. Rydygier, son of Prof. L. Rydygier, for injury on account of permanent disability induced by experimenting with the Roentgen rays. He was awarded $1,250 damages and a small lifelong pension.

"By the way," said the gentlemanly-looking person in the black broadcloth suit, "if you mention my name in connection with the accident, you may say that 'Dr. Swanken was called, and the fractured arm was suitably bandaged,' or something to that effect. Please spell the name correctly. Here's my card." "Thanks," said the reporter, looking at the card. "You are next door to Dr. Rybold, I believe. Are you acquainted with him?" "No, sir," replied Dr. Swanken, stiffly. "We do not recognize

Dr. Rybold as a member of the profession. He advertises-''—*Maryland Medical Journal.*

The American Neurological Association meets in St. Louis, at the Planters' Hotel, instead of in the World's Fair grounds, as originally planned. The sessions will last from 9 A. M. to 1 P. M. daily. A general invitation to attend is extended to the medical profession.

A hospital with 2,000 beds, with a death rate of thirty a day and a birth-rate of 10,000 a year, is what Vienna boasts in its great Royal and Imperial State Krankenhaus, or infirmary.

COUNTY SOCIETY NOTES.

MISSISSIPPI COUNTY.

The Mississippi County Medical Society met on the fourth of July, and as there was no scientific programme after reading minutes of preceding meetings, election of officers was declared in order. The election resulted as follows: President, A. J. Martin, East Prairie, Mo.; Vice-President, A. E. Simpson, Charleston; Secretary, W. P. Howle, Charleston; Treasurer, C. A. Story, Diehlstadt.

Notwithstanding the excessive amount of rain, the doctors are all positively busy.

W. P. HOWLE, Reporter.

MARION COUNTY MEDICAL SOCIETY.

The Marion County Medical Society met in regular session July 1st, Dr. Richard Smith in the chair.

Dr. E. T. Hornback presented a case of sarcoma of the superior maxilla. The case elicited much interesting discussion. As the surrounding tissues were greatly involved in the new growth, the consensus of opinion was that operative interference had little hope of success, but that much good might result from the use of the x-rays.

Dr. J. N. Baskett read a paper on puerperal eclampsia. He cited a case of eclampsia gravidarium occurring about the seventh month. The patient was suddenly seized with violent convulsions, which were frequently repeated. Venesection and the induction of labor were resorted to. After the withdrawal of twelve ounces of blood and the birth of the fœtus the convulsions ceased and the patient made a good recovery.

Dr. Thomas Chowning read a paper on empyema, reporting a number of interesting cases. In outlining his method of treatment the doctor stated that the fundamental rule is to remove the pus as early as possible and to secure thorough drainage as long as the secretions persist. He believes it to be good preliminary practice to aspirate some hours before resection of the rib.

The attendance at the meeting was unusually good. Dr. B. J. Jandon, of Palmyra, and Dr. W. C. Guss, of Hannibal, were elected members of the society.

H. L. BLANKS, Reporter.

CHARITON COUNTY.

The Chariton County Medical Society met in regular session at the new office of Dr. J. Franklin Welch, Salisbury, June 30th, Dr. M. B. Austin presiding. Dr. C. A. Jennings and Dr. Wilford Baker were appointed reporters for the society.

Dr. I. H. P. Baker reported a case of eclampsia parturientium, the patient having had one very severe convulsion before the doctor was called. He immediately administered calomel gr. x, and gave hypodermically morphine sulphate gr. ¼, followed shortly by tincture veratrum viride Mxxx, likewise hypodermically given. The bag of waters was ruptured, and the escape of the liquor amnii followed by feeble, ineffectual pains. Forceps were applied and one child delivered. Normal delivery of the second child occurred thirty minutes later, the convulsion symptoms having ceased altogether after the birth of the first child. Nervous symptoms and fever continued for several days concomitant with an acute attack of leucocythemia. The patient is now improving slowly. The twins are doing nicely.

At the July meeting papers will be read by Drs. C. H. Temple and H. E. Kirkpatrick. The outlook for the upbuilding of the society is very encouraging.

C. A. Jennings, Secretary.

JASPER COUNTY.

The Jasper County Medical Society met in regular session in the Y. M. C. A. building at Joplin, Mo., at 8 P. M., June 20th. There was a good attendance. No papers were read, but the entire evening was given to the presentation of subjects, at random, bearing on the welfare of the society and its members.

Dr. S. H. Miller reported two instances of persons practicing medicine in Joplin without a license. Jasper county, especially the Joplin district, is overrun with quacks, charlatans and fakirs. The osteopath, thanks to the lack of organization of the physicians in this state a few years ago, revels in this atmosphere.

D. S. H. Miller was appointed to investigate and report specific instances of violation of the law regulating the practice of medicine in this city.

The society decided to adjourn its regular meetings until the third Monday in September.

On motion of Dr. Lanyon, it was decided to hold a mid-summer meeting of all the phyiscians and their wives and families in Jasper county at Lake Side, at a date to be set later, in August. At this time a picnic will be given and some papers read on the welfare of the county society.

The lord of a shack in Lone Elm rushed into a Joplin physician's office recently and requested the doctor to repair to his domicile at once to attend his wife, who was in labor. The doctor, not knowing the visitor, asked who he was and something relative to remuneration for his services.

"You ain't one of them pay doctors, air you, doc?" The doctor admitted that he was. Then said the visitor: "I've lived in this county nine year, and never paid a cent to a doctor yit, and I don't intend to begin now. Good ev'nin."

Chas. C. Cummings, Reporter.

HOWARD COUNTY MEDICAL SOCIETY.

The Howard County Medical Society met at New Franklin, July 19th, Dr. V. Q. Bonham presiding. After the usual preliminary business, Dr. C. W. Watts, of Fayette, read a paper on "Surgical Treatment of Punctured Wounds." The paper met with general approval of the members present. Interesting cases were presented by Drs. Bonham and White.

The first number of the JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION was presented to the society by the presiding officer. The able editor, Dr. C. M. Nicholson, was highly complimented on the general excellency of the publication. The Committee on Programme and Scientific Work reported that at the August meeting Dr. J. B. Fleet will read a paper on "Cholera Infantum," Dr. H. V. Cordry, a paper on "Cholera Morbus" and Dr. J. A. White, a paper on "Local Applications in Pneumonia."

The citizens of New Franklin entertained the members of the society most royally.

C. W. WATTS, Reporter.

BUCHANAN COUNTY MEDICAL SOCIETY.

The regular meeting Wednesday evening, June 1, was held at the Commercial Club rooms, and was designated a fraternal smoker. The minutes of the previous meeting were read and approved.

Upon motion the order of business was reversed on the program.

Committee on by-laws and constitution reported that the secretary of the state association had approved same, and a motion was made to adopt the report. Amendments were then made, changing the meeting night to the first and third Friday in each month, and designating the first meeting in December as the annual session. Carried.

The committee on place of meeting reported that the hall in King Hill building had been secured, beginning with June, at the rate of twenty dollars per quarter, including light, heat, janitor service and telephone. Upon motion the report was adopted and committee discharged.

The committee on fraternal smoker reported that arrangements had been made for a place of meeting and for refreshments, and a vote of thanks was extended to those contributing to the event, as follows:

The Commercial Club, Mr. Nete Ellis, Union Agency Co., White Rock Mineral Spring Co., St. Joseph Brewing Co., Anheuser Brewing Co., Mr. Schopflin and Mr. W. S. Kinnison. Upon motion ten dollars was appropriated to pay the expenses of lunch, and a warrant ordered drawn upon the treasurer.

Bills were allowed as follows: $15.75 for rent to the School District of St. Joseph, $2.50 to Lon Hardman for cards and stamps, and warrants ordered drawn upon the treasurer.

A communication was read from Dr. Nicholson, secretary of the State Society, asking that the society appoint an editor, whose duty it should be to report the proceedings of the Buchanan County Medical Society for the *State Medical Journal*. Upon

motion D. L. A. Todd was selected as editor.

Dr. Frederick Eliscu was duly elected to membership in the society. The application of Dr. Isaac Lechtman was read and referred to the board of censors.

Drs. Campbell, Sampson, Wallace and Kenney reported interesting cases.

Upon motion of Dr. Sampson, a vote of thanks was extended to the St. Louis Medical Society and to Dr. Nicholson, secretary of the State Association, for courtesies extended to the members of the Buchanan County Medical Society during the recent meeting in St. Louis. The following program was then presented:

A United Profession ..... Chas. Wood Fassett
Our State Society—
1. The Medical Side ..... J. H. Sampson
2. The Surgical Side ..... L. A. Todd
3. Delegate's Report ..... O. B. Campbell
4. Councillor's Report ..... C. H. Wallace

At the conclusion of the regular program Dr. T. H. Doyle was called to the chair, who called for "flotsam and jetsam," and, under the benign and soporific influence of the fragrant Havana, the spirit of fraternal fellowship in the lighter vein prevailed during the remainder of the evening.

Upon motion, the society adjourned to the first Friday in September.

BUTLER COUNTY MEDICAL SOCIETY.

The Butler County Medical Society convened in regular session in Council Chamber, City Hall, at Poplar Bluff, July 19th, Dr. Greene presiding. The scientific programme was omitted owing to election of officers. Dr. W. E. Highfill, of Neeleyville, was elected president for the ensuing year; Dr. I. W. Seybold, of Poplar Bluff, vice-president; Dr. J. J. Norwine, re-elected secretary, and Dr. B. C. Jones, re-elected treasurer.

Dr. Charles F. Greene, retiring president, lately having announced that he would change his location from Poplar Bluff, Mo., to Bakersfield, Ozark County, Mo., resolutions as follows were offered and unanimously passed:

"*Resolved*, That in the departure from our city of our retiring president, Dr. Chas. F. Greene, we lose one of the most progressive members of our society, and a citizen who has always enjoyed the full and hearty fellowship of our best people; therefore, be it further

Resolved, That we, the members of the Butler County Medical Society, seriously regret his move, but wish him and his most excellent family success and God's blessing abundantly bestowed."

On motion of Dr. Norwine the members retired, after adjournment, to enjoy luncheon in honor of Dr. Greene.

Desperately hot weather is causing profound malarial complications, otherwise our people are enjoying fair health, as very little contagious disease is present.

Your writer had the pleasure of visiting Bloomfield, Mo., the county seat of Stoddard County, a few days ago and organized the largest and best medical society in Southeast Missouri. Twenty-two earnest and up-to-date physicians of that county marched into the court-house and signed their names, producing the

necessary "root of all evil" to support the County Society for one year, including the home expenses. It affords a councillor much pleasure to organize nine-tenths of the medical men in a county in one day; it speaks volumes for the intelligence of any county or district.

J. J. NORWINE, Reporter.

STODDARD COUNTY.

The Stoddard County Medical Society was organized at Bloomfield, June 22d, under direction of Dr. J. J. Norwine, Councillor for District number ten. Officers were elected as follows: T. B. Turnbaugh, Bloomfield, President; T. B. Wings, Dexter, Vice-President; D. R. Corbin, Bloomfield, Secretary; S. N. Evans, Bloomfield, Treasurer; T. C. Allen, Bernie, Reporter.

Regular meetings are to be held the first Wednesday in March, June, September and December.

The society met at Bloomfield, July 20th, Dr. T. B. Turnbaugh presiding. A very interesting paper on "Summer Diarrhea and Dysentery" was read by Dr. Hill, of Dexter. Dr. Hill laid special stress on the treatment of the conditions by antiseptics rather than astringents. His plan is to thoroughly clean out the gastric intestinal tract, and then give intestinal antiseptics by both mouth and rectum. Sulphocarbolate of zinc, he thinks, the best antiseptic here, while bismuth, listerine, paregoric, glycerine and cinnamon are prescribed when astringents are indicated. The use of epsom salts is advised against.

Discussion of the paper was general as follows:

Dr. Cointers:—I think some cases are injured by the use of purgatives, and if I give a purgative I avoid calomel.

Dr. Turnbaugh:—Cases showing distended abdomen and offensive dejections, particularly call for a purgative. In dysentery, epsom salts is the best purgative.

Dr. Vernon:—I favor rigid antisepsis, but I wish to emphasize the fact that it is folly to follow an antiseptic course of treatment and continue to put septic food into the stomach. I stop all feeding for a day or two until the bowel is clear. Ipecac is sometimes a good purgative, especially if the stomach is irritated. I often stimulate some vicarious action to rest the affected organ.

Dr. Evans:—I do not use purgatives unless I see the case early, and I use astringents sparingly.

Dr. Allen:—I think summer diarrheas usually result from disordered intestinal secretions coupled with fermentation of ingesta, especially milk, hence I give callolactose to stimulate secretion, followed by antiseptic treatment, rendering astringents rarely necessary. If my case shows periodicity, which it usually does, I give quinine. If there is tenesmus and the stools show blood, I find a suppository of opium, tannin, lead acetate and hydrastis the best means of correcting the trouble, as it is usually in the lower eight inches of the bowel. Where the child is old enough I advise the use of foods containing salt and fat.

Dr. Wings:—My observation is that in 90 per cent. of the cases the blood which so alarms mothers comes from

the anus, as a result of the rupture of small congested veins.

Dr. Caldwell presented a case of a girl eleven years old with normal growth of the matrix of the great toe.

T. C. ALLEN, Reporter.

BIOGRAPHICAL SKETCHES.

ÆSCULAPIUS.

ÆSCULAPIUS, in the heathen mythology, the god of medicine, was the son of Apollo and the nymph Coronis. He was educated by the centaur Chiron, who taught him the art of healing; and his skill enabled him to cure the most desperate diseases. But Jupiter, enraged at his restoring to life Hippolytus, who had been torn in pieces by his own horses, killed him with a thunderbolt. At Epidaurus, Æsculapius' statue was of gold and ivory, with a beard, a knotty stick in one hand and the other entwined with a serpent; the figure was seated on a throne of the same materials as the statue. The Romans crowned him with laurel, to represent his descent from Apollo; and the Phliasians represented him as beardless. The cock, raven, and the goat were sacred to this deity. In many places votive tablets were hung up, showing the names of those cured and the diseases of which they were healed by his assistance.

HIPPOCRATES.

HIPPOCRATES, termed the "Father of Medicine," was bornin Cos, in 460 B. C. He was a member of the family of the Asclepiadæ, and was be-

lieved to be either the nineteenth or seventeenth in direct descent from Æsculapius. It is also claimed for him that he was descended from Hercules through his mother, Phaenarete. He studied medicine under Heraclides, his father, and Herodicus, of Selymbria; in philosophy, Gorgias, of Leontini, and Democritus, of Abdera, were his masters. His earlier studies were prosecuted in the famous Asclepion of Cos, and probably also at Cnidos. He traveled extensively and taught and practiced his profession at Athens. He died at Larissa, in Thessaly, his age being one hundred and nine. The incidents of his life are shrouded by uncertain traditions, which naturally sprang up in the absence of any authentic record; the earliest biography was by one of the Sorani. He is referred to by Plato as an eminent medical authority, and his opinion is also quoted by Aristotle. The veneration in which he was held by the Athenians serves to dissipate the calumnies which have breen thrown on his character by Andreas, and the whole tone of his writings bespeaks a man of the highest integrity and purest morality.